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EXAMINER

TRAN, NHAN T

ART UNIT	PAPER NUMBER
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2622

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/10/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/623,353

Applicant(s)

GANN ET AL.

Examiner

Nhan T. Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 February 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 2/2/2007 with respect to claim 21 have been considered but are moot in view of the new ground of rejection.
2. Applicant's arguments filed 2/2/2007 with respect to claims 1-20 & 22-26 have been fully considered but they are not persuasive.

Regarding independent claims 1, 19 and 22, the Applicants assert that each of claims 1, 19 & 22 has been amended to recite an enclosure configured to have a plurality of features controlling operation of the digital camera, and the plurality of features each increasing operational sophistication of the digital camera. The Applicants conclude that Kanamori *does not* teach the above limitations (see Remarks, pages 11-13).

In response, the Examiner understands the Applicant's arguments but respectfully disagrees with the Applicants' assessment of the claims. Kanamori teaches that the waterproof enclosure (10 shown in Figs. 1-4) is configured to have a plurality of features such as image capture modes (e.g., auto, fix close-up, macro, etc. provided by the mode dial 66), exposure correction (68), flashing modes (70) that control the digital camera (18) as disclosed in col. 6, lines 25-67. It is clearly seen that each of disclosed features increases operational sophistication of the digital camera by *at least* controlling the digital camera operations under water without damaging. Additionally, the enclosure includes a flashing feature that enables the flash unit of the

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enclosure to output *much more flash quantity* compared to the built-in flash of the digital camera so as to allow capturing an object image under bad condition as the camera submerges under water (see col. 10, lines 18-25 and col. 3, lines 49-65). The enclosure also provides a wide-angle feature with a wide-angle lens (col. 5, lines 55-62). Thus, each of the plurality of features provided on the enclosure (10) is to increase operational sophistication of the digital camera (18). In general, the claimed limitations are broad enough to read on the disclosure of Kanamori.

In view of the above, the rejections of claims 1-20 & 22-26 are maintained.

Specification

3. Amendment to specification filed 2/2/2007 to correct minor errors is acknowledged and accepted.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-7, 11-15, 19, 20, 22-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Kanamori et al. (US 6,138,826).

Regarding claim 1, Kanamori et al. (hereafter referred as "Kanamori") discloses an image capture system (Figs. 1-4; col. 5, lines 6-12) comprising:

a digital camera (e.g., a digital camera 18), the digital camera comprising at least a photosensor (see Fig. 4 and col. 5, lines 6-12 and col. 7, lines 1-4, wherein a photosensor is an inherent image sensor of the digital camera 18 for capturing an image and displaying on the camera's LCD 60 as disclosed);

an enclosure (a waterproof case 10) configured to receive the digital camera (Figs. 1-4 and col. 5, lines 6-12), configured to have a plurality of features (i.e., capture modes at dial button 66, exposure correction 68, flash modes 70, display mode 72, etc...as shown in Fig. 2) controlling operation of the digital camera, and configured to capture an image using the photosensor of the digital camera (see Fig. 2; col. 6, line 25 – col. 7, line 4 in which the waterproof case 10 captures an image using the image sensor of the digital camera 18 by controlling the operation of the digital camera in response to the operational features provided on the waterproof case), the plurality of features each increasing operational sophistication of the digital camera (col. 3, lines 49-65 and col. 6, lines 25-67 and note the Examiner's response above for each feature increasing operational sophistication of the digital camera by at least waterproofed features and a stronger flash feature).

Regarding claim 2, Kanamori further discloses a processor (a control circuit of the waterproof case 10, col. 6, line 25 – col. 7, line 4) configured to control operation of the digital camera and the enclosure. *It is noted that "a processor" defined by Oxford*

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English Dictionary is "a machine or system that performs a process." Thus, "a processor" is met by the control circuit of the waterproof case 10 since the control circuit is a system of circuits for processing signal(s) sensed from operation of the buttons residing on the waterproof case for controlling the digital camera and the waterproof case.

Regarding claim 3, also discloses by Kanamori is a first processor residing in the digital camera and configured to control operation of the digital camera and the enclosure (see col. 10, line 58 – col. 11, line 20 and col. 7, lines 1-4, wherein "a first processor" is inherently included in the digital camera 18 to process signal(s) for controlling both the operation of the digital camera and the enclosure by capturing an image, displaying the image in addition to measuring object's brightness and outputting a slight flash emission at the built-in flash of the digital camera or a flash control signal via a synchronization cable. The flash control signal sent from the digital camera based on the measurement of object's brightness controls the waterproof case 10 by triggering the flash device 28 for synchronization); a second processor (main control circuit and/or flash control circuit 100 of the waterproof case 10) residing in the enclosure, configured to control at least partial operation of the enclosure (see col. 6, lines 25-65 and col. 10, lines 11-41). Note the definition of a processor in claim 2.

Regarding claim 4, see the Examiner's analysis of claim 3 in which the second processor controls the operation of the enclosure (col. 6, lines 25-65 and col. 10, lines 13-41).

Regarding claim 5, it is clear that the first processor and the second processor operate in conjunction to control operation (flashing operation) of the enclosure. See col. 10, line 11 – col. 11, line 20 in which the first processor of the digital camera controls the flash device 28 of the waterproof case in automatic flash mode by measuring object's brightness and outputting flash synchronization signal via a cable or a slight flashing of the camera's built-in flash to the flash control circuit 100. The flash control circuit 100 of the waterproof case then directly controls quantity of flash emission of flash device 28 to emit much more flash quantity than the camera's built-in flash.

Regarding claim 6, Kanamori discloses that the enclosure further comprises:
a first portion (a case body 12 shown in Fig. 3 and col. 5, lines 6-12);
a second portion (a lid 16 shown in Fig. 3 and col. 5, lines 6-12);
wherein the digital camera (18) is configured to be enclosed within the first portion and the second portion (see Figs. 3 & 4 and col. 7, lines 8-30).

Regarding claim 7, also clearly disclosed by Kanamori is that the enclosure further comprises a receptacle (Figs. 3 & 4) configured to receive the digital camera (see col. 7, lines 8-30).

Regarding claim 11, Kanamori further discloses that the digital camera (18) further comprises at least one first controller configured to control an operation of image capturing (col. 4, lines 9-11; col. 10, line 58 – col. 11, lines 20 and col. 5, lines 65-67, it is noted that the digital camera 18 inherently has its own controller for controlling the operation of the image capturing since the digital camera 18 can operate independently as a stand alone device when it is detached from the waterproof case. The digital camera 18 further operates in conjunction with the operation of the waterproof case 10 when the digital camera is attached to the waterproof case by controlling detection of object's brightness, capturing digital images, and displaying digital images on LCD 60, etc.) and the enclosure further comprises at least one second controller (main control circuit) configured to control the operation of image capturing (col. 6, lines 25-66 & col. 10, lines 18-25 in which "control the operation of image capturing" is represented by the control steps of setting a capture mode at dial button 66, releasing a shutter at button 34 and then flashing and capturing an image), the second controller having at least one feature different from the first controller (see col. 6, lines 25-35 and col. 10, lines 18-25; wherein the different feature of the control circuit of waterproof case is that the control circuit can control the flash device 28 in different flash modes such as automatic mode, compulsory emission mode and stop mode in response to the operation of flash button 70 to output much more flash quantity than the built-in flash of the digital camera. It should be noted that the main control circuit of the waterproof case 10 performs *overall* control operation of the waterproof case *including* the flash device 28 in response to

operation of the flash button 70, and the flash control circuit 100 directly controls of the emission quantity of the flash device 28).

Regarding claim 12, Kanamori also discloses that the enclosure further comprises a third controller (flash control circuit 100 shown in Fig. 14) to control a different operation of image capturing (flashing with much more flash quantity) that is not controllable by the digital camera. See col. 11, lines 2-10 and col. 10, lines 23-25. Note that flashing operation is a part of image capturing operation as discussed in claim 11 above.

Regarding claim 13, it is also seen in Kanamori that the enclosure further comprises at least one indicator (flashing of flash device 28) configured to indicate an operation of image capturing not indicated by the digital camera. See Figs. 1-4 and col. 10, line 11 – col. 11, line 20 in which the digital camera 18 and its built-in flash is completely enclosed in the enclosure 10 and therefore cannot indicate to the user by flashing. Instead, the enclosure 10 produces flash emission by the flash device 28 to indicate that the image is captured.

Regarding claim 14, Kanamori clearly discloses that the digital camera further comprises a first lens (a taking lens of the digital camera 18) and the enclosure comprises a second lens (a wide angle lens 56 of the enclosure 10 shown in Fig. 5), the

second lens having at least one feature (wide angle feature) different from the first lens (see col. 9, lines 48-65).

Regarding claim 15, as disclosed in col. 9, lines 48-65, the enclosure further comprises a lens coupler (Fig. 5) configured to couple the second lens to the enclosure, and where the lens coupler permits the second lens to detach (by unscrewing wide angle lens 56) from the enclosure.

Regarding claim 19, Kanamori discloses a method for capturing images (col. 2, lines 46-49), the method comprising the steps of:

coupling a digital camera (18) and an enclosure (10), the digital camera residing within a recess (42) of the enclosure (see Fig. 4 and col. 5, lines 30-54 and col. 6, lines 25-35);

providing a plurality of image capture features on the enclosure (i.e., capture modes, flash modes, exposure correction, etc. shown in Fig. 2), the plurality of image capture features controlling operation of the digital camera, the plurality of image capture features each increasing operational sophistication of the digital camera (see col. 3, lines 49-65; col. 5, lines 55-62; col. 6, lines 25-67 and col. 10, lines 23-25 and note the Examiner's response above for the explanation of increasing operational sophistication of the digital camera);

selecting at least one image capture feature (i.e., a capture mode or a flash mode) among the plurality of image capture features using a device (e.g., operating

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buttons) residing on the enclosure (Fig. 2 and col. 6, lines 25-63) and capturing an image on a photosensor (an inherent image sensor of the digital camera 18) residing in the digital camera (col. 6, line 25 – col. 7, line 4), the image captured through a lens (Fig. 5) residing on the camera enclosure (see col. 5, lines 55-63 and col. 9, lines 48-65).

Regarding claim 20, Kanamori further discloses the step of capturing the image with the digital camera when the digital camera is decoupled from the camera enclosure (see col. 4, lines 9-11 and col. 7, lines 1-4, 60-67 in which the digital camera 18 operates to capture images as a stand-alone digital camera when it is detached from the enclosure 10).

Regarding claim 22, Kanamori discloses an image capture system (Figs. 1-4 and col. 1, lines 5-9), comprising:

means for capturing an image with a photosensor residing in a digital camera (digital camera 18; see Figs. 1-4; col. 5, lines 7-12 and col. 6, line 25 – col. 7, line 4. Note that “means for capturing an image with a photosensor” is represented by an inherent image sensor of the digital camera 18 for capturing an image);

means (cable 80 and attachment member 48 shown in Figs. 3 & 4) for coupling the digital camera to an enclosure (a waterproof case 10; see col. 5, lines 36-54 and col. 7, lines 8-22), the enclosure further comprising a plurality of means (capture modes, flash modes, exposure correction, etc. shown in Fig. 2) for increasing operational

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sophistication of the digital camera (see col. 3, lines 49-65; col. 5, lines 55-62; col. 6, lines 25-67 and col. 10, lines 23-25 and note the Examiner's response above for the explanation of increasing operational sophistication of the digital camera);

means (control circuit of the waterproof case 10) for controlling a process of image capture (i.e., capture mode, shutter release operation, flashing and exposure correction, etc.) with at least one device (at least one of buttons 66, 34, 68 & 70 shown in Fig. 2) residing on the enclosure (col. 6, line 25 – col. 7, line 4).

Regarding claim 24, Kanamori also discloses a second means (flash control circuit 100 of the waterproof case 10 shown in Fig. 14, col. 10, lines 11-41) for controlling operation of the enclosure (flashing operation), the second means for controlling operating *in conjunction* with [the] means (circuits of digital camera 18) for controlling operation of the digital camera (capturing an image, measuring object's brightness) and the enclosure (outputting a flash control signal to the waterproof case via a cable for flash synchronization). See col. 10, line 56 – col. 11, line 20. Note the Examiner's comments in claims 3 & 5.

Regarding claim 23, the limitations of claim 23 is also met by the analysis of claim 24 above.

Regarding claim 25, Kanamori clearly discloses means (control circuit of the waterproof case 10) for controlling at least one operation of an image capture process

(i.e., capture mode, shutter release operation, flashing and exposure correction, etc.), the means for controlling residing in the enclosure and configured to control the digital camera. See col. 6, line 25 – col. 7, lines 4.

Regarding claim 26, further disclosed by Kanamori is a means (58) to couple a lens to the enclosure (see Figs. 3 & 5 and col. 5, lines 55-63 and col. 9, lines 48-56).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 8 & 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanamori et al. (US 6,138,826) in view of Takematsu (US 2003/0214593 A1).

Regarding claim 8, although Kanamori teaches the waterproof case 10 including a built-in flash device 18 and the digital camera causing the flash device 28 to flash in accordance with a synchronous signal sent from the digital camera during photography (col. 5, lines 20-30 and col. 11, lines 11-20), Kanamori does not explicitly teach that the enclosure further comprises a coupler configured to receive a flash attachment, and wherein the digital camera is configured to cause the flash attachment to flash.

However, in the reference to Takematsu, a digital camera (15) enclosed in a waterproof housing (9) is taught (see Figs. 1-4; paragraphs [0001] and [0030]). The waterproof housing includes both a built-in flash (3) and an external flash (11) attached to a coupler (7) of the housing such that the external flash (11) and/or the built-in flash (3) is configured to flash in response to the operation of the shutter release during photography (Takematsu, Fig. 1 and paragraphs [0036] and [0040]). According to Takematsu, the use of both of the built-in flash (3) in the housing and the external flash attachment (11) provides the imaging apparatus to capture good photographs with right exposures as suggested by Takematsu, paragraph [0012].

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the enclosure of Kanamori to include a coupler configured to receive a flash attachment such that the digital camera would be configured to cause the flash attachment and/or the built-in flash of the enclosure to flash during photography so as to obtain good photographs with right exposures under different lighting conditions as suggested by Takematsu.

Regarding claim 9, Kanamori discloses that the digital camera (18) further comprises a first grip (an inherent side portion of the camera) and the enclosure (10) further comprises a second ergonomic grip larger than the first grip (see Kanamori, Figs. 1, 2 & 4). Kanamori, however, does not explicitly disclose that the first grip is an ergonomic grip.

As taught by Takematsu, a digital camera (15) comprises an ergonomic grip (under shutter button 3 shown in Fig. 3 and paragraphs [0029] & [0030]). The digital camera is enclosed within a waterproof housing (9) having another ergonomic grip (Fig. 2). Such ergonomic grip of the camera would provide the user a better and comfortable handling of the camera in ergonomic fashion when the camera is detached from the housing to operate as a stand-alone device.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the digital camera of Kanamori with an ergonomic grip which is smaller than the ergonomic grip of the waterproof case to provide better and comfortable handling of the digital camera when the digital camera is detached from the housing to operate as a stand alone device.

6. Claims 10 & 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanamori et al. (US 6,138,826) in view of Da Silva (US 6,819,866 B2).

Regarding claim 10, Kanamori teaches that the digital camera comprises a first display (LCD 60 shown in Fig. 4) and the enclosure comprises a transparent window (62) (col. 5, lines 64-67). Kanamori does not teach a second display located on the enclosure and being larger than the first display of the camera.

Da Silva teaches a waterproof housing (2) that contains a camera (4) therein (Figs. 1-3). Da Silva further teaches a LCD monitor (20) provided on the housing for displaying images and/or information related to the system (see Da Silva, col. 8, line 65

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– col. 9, line 7 and col. 10, lines 50-51). According to Da Silva, the LCD monitor is preferably **at least 3 inches in size** which is relatively larger than a conventional LCD monitor of a camera (see Da Silva, col. 10, lines 40-49).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the enclosure of Kanamori in view of the teaching of Da Silva to replace the transparent window 62 with a relatively large LCD display which is larger than the LCD display of the digital camera so as to improve viewing area with larger view of a captured image while avoiding any limitation on a user's peripheral vision as suggested by Da Silva, col. 9, lines 1-8.

Regarding claim 21, Kanamori discloses a method for capturing images (col. 2, lines 46-49), the method comprising the steps of:

generating an image capture instruction (a shutter release instruction) using a device (i.e., a shutter button 34 shown in Figs. 1-3) residing on an enclosure (a waterproof case 10) (see col. 6, line 25 – col. 7, line 4);

communicating (via cable 80 and connector 80A shown in Fig. 4) the image capture instruction to a digital camera (a digital camera 18) coupled to the enclosure and residing within a recess of the enclosure (Fig. 4 and col. 6, line 25 – col. 7, line 4); capturing an image with a photosensor (an inherent image sensor of the digital camera 18) residing in the digital camera, the step of capturing performed in accordance with the received image capture instruction (i.e., the shutter release instruction). See col. 6, line 25 – col. 7, line 4.

Kanamori fails to disclose that the capture instruction is generated by a remote device communicatively coupled to the enclosure.

In the same field of endeavor, Da Silva teaches a waterproof housing (2) that contains a camera (4) therein (Figs. 1-3) and a universal remote control device (keypad 11 shown in Fig. 2) for controlling the operation of the camera so that the user can control a plurality of different types of video cameras in a convenient manner as suggested in col. 1, lines 30-42; col. 7, lines 46-58 and col. 8, lines 49-61.

Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Kanamori and Da Silva to provide the enclosure with a universal remote control device for controlling the camera enclosed therein by generating an image capture instruction in addition to other commands so as to enable the user to remotely control a plurality of different types of video cameras in a convenient manner.

7. Claims 16 & 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanamori et al. (US 6,138,826) in view of Inoue (US 5,822,622).

Regarding claim 16, Kanamori discloses the image capture system including a wide angle lens and an automatic focus operation of a lens in an AUTO mode (col. 6, lines 48-54). Kanamori fails to disclose that the enclosure further comprises a focus ring residing on the enclosure and configured to adjust a focus of the image.

However, as taught by Inoue, a camera (80) is enclosed in a waterproof housing (20) which further includes an adjusting ring (35 or 55) provided thereon for manually adjusting focus of an image (see Inoue; Figs. 1, 4 & 5; col. 3, lines 32-49, col. 4, lines 46-60 and col. 5, lines 11-46). Inoue clearly teaches that the implementation of the manual control of focus of an image using the adjusting ring residing on the waterproof housing is to improve focus operation to obtain a satisfactory image in a case when the automatic focus fails to work effectively (see Inoue, col. 1, line 60 – col. 2, line 7).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Kanamori and Inoue to modify the image capture system by providing a manual focus for adjusting focus of an image using an adjusting ring when capturing an image so that the user would perform focus operation more effectively to obtain a satisfactory image in a case when automatic focus fails to do so.

Regarding claim 18, Kanamori does not teach that the enclosure further comprises a zoom control ring residing on the enclosure and configured to adjust a focal length of the second lens used when capturing the image.

Inoue teaches a camera (80) that is enclosed in a waterproof housing (20) which further includes an adjusting ring (35 or 55) provided thereon for manually adjusting zoom lens of image capture system (see Inoue; Figs. 1, 4 & 5; col. 3, lines 32-49, col. 4, lines 46-60 and col. 5, lines 11-46). According to Inoue, manual zoom adjustments are important during photography since the target object may change frequently and

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quickly, and therefore manual zoom adjustments to focal length of the lens are used to compensate such changes to obtain a satisfactory picture (Inoue, col. 1, line 64 – col. 2, line 7).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Kanamori and Inoue to modify the image capture system by providing a manual zoom for adjusting a focal length of the second lens using an adjusting ring so that the user would perform manual zoom operation to quickly change the focal length of the lens for obtaining a satisfactory image of the object when the target object is moving frequently and quickly.

8. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kanamori et al. (US 6,138,826) in view of Inoue (US 5,822,622) and in further view of Niikawa et al. (US 2001/0043279 A1).

Regarding claim 17, by incorporating the combined teachings of Kanamori and Inoue as discussed in claim 16 and/or claim 18, the image system of Kanamori and Inoue includes disclose adjusting rings provided on the enclosure to allow the user to manually adjust the operation of the image capture system in cases when the environment and/or object is changing that causes failure of an automatic operation mode for obtaining a satisfactory image.

However, both Kanamori and Inoue are silent about an aperture ring residing on the enclosure and configured to adjust an aperture used when capturing the image.

In a reference to Niikawa, a camera apparatus includes an aperture ring (43) for manually adjust the aperture of the camera to correct exposure in addition to other focus and zoom rings (41 & 42) for adjusting lens so that proper exposure of an image is corrected in response to the user's intervention. See Niikawa, Figs. 1 & 2, paragraphs [0058]-[0060].

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify the image capture system of Kanamori and Inoue to include an aperture for the digital camera and an aperture ring residing on the enclosure to allow the user to manually adjust the aperture of the camera to obtain proper exposure of an image in accordance with the user's intend to obtain a satisfactory image regardless changes of environment or target objects, thereby improving the operation of image capture system.

9. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kanamori et al. (US 6,138,826) in view of Niikawa et al. (US 2001/0043279 A1).

Regarding claim 27, Kanamori discloses a method and apparatus for capturing images by performing the steps of:

receiving an image capture instruction (capture mode or shutter release instruction) from an enclosure (waterproof case 10) (see Fig. 2 and col. 6, lines 25-66);

capturing an image with a photosensor residing in a digital camera (digital camera 18 in which a photosensor is an inherent image sensor) when the digital camera

is coupled to the enclosure, the step of capturing performed in accordance with the received image capture instruction (see Figs. 1-4; col. 5, lines 6-12 and col. 6, line 25 – col. 7, line 23).

Kanamori does not disclose the above method and apparatus to be realized by a computer-readable medium having a program for capturing images.

However, Niikawa teaches an image capture system (Fig. 6) that comprises a digital camera having a computer-readable medium (ROM 211b) storing a program (a control program) for optionally performing image capture operation in response to communication from an external device (225) via a communication interface (224) so that the operation of the digital camera can be controlled externally (see Niikawa, paragraphs [0089]-[0094], [0084]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Kanamori and Niikawa to implement the image capture system in Kanamori with a control program which is stored in a computer-readable medium of the digital camera. As doing this would improve flexibility of the camera's functionality by updating the control program so as to avoid hardware reconstruction or purchasing a new camera, thereby improving user's convenience.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nhan T. Tran whose telephone number is (571) 272-7371. The examiner can normally be reached on Monday - Friday, 8:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NHAN T. TRAN
Patent Examiner

A handwritten signature in black ink, appearing to read 'David Ometz', with a long horizontal line extending to the right.

DAVID OMETZ
SUPERVISORY PATENT EXAMINER